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ABSTRACT

This document outlines the development of a program that would extend teacher training to include a fifth year of internship. A dual continuum of training is suggested. The first portion is designed to help the beginning teacher develop an adequate sense of self, poise, and a secure assurance that the classroom, pupils, and supervisors do not constitute a threat to personal development and growth. Equally important is the second concept of developing an effective teacher; providing skills focused on adequate management and instruction of students. Allotment of time for accomplishing set tasks, successful interaction with students, and understanding how previous theories learned in college may be transferred to effective teaching are considered fundamental in an internship program. (JD)

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OSSC BULLETIN

DEFINING THE EFFECTIVE TEACHER PROVOCATIONS FOR REFORM IN TEACHER EDUCATION

by

Sandra Scofield

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
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PREFACE

Sandra Scofield, an experienced elementary and secondary teacher, is presently a doctoral student in the Division of Teacher Education in the University of Oregon. She was commissioned to produce a summary and analysis of research relating to teacher education and teaching effectiveness that would serve as a beginning point for program development.

Her findings are summarized and reported in this Bulletin. Sandra's report, along with numerous other studies, has provided an information base which has allowed the Division of Teacher Education to embark on two exciting ventures. The first is the development of a five-year teacher education program for both elementary and secondary teachers. This program requires a full fifth year of internship and incorporates the necessary components to prepare teachers to meet the demands of Public Law 94-142. The second venture is the establishment of the Institute for Inservice Education which, in partnership with cooperating school districts, conducts research to determine the effectiveness of alternative inservice models.

Both ventures are supported by the findings in this Bulletin. These new endeavors are informed by the message that the education of teachers is a process which must extend beyond the first four years of college. The data are clear in pointing to the need for

increased time, practice, and feedback as the most salient training variables.

With the impact of such things as P.L. 94-142, Career Education and minimum standards, the initial and continuous education of teachers is of major consequence.

Sandra Scofield's paper provides a baseline for change.

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I. Introduction

Consider a familiar scene. A student teacher - lesson plan, handouts, and gradebook in hand - begins a day of teaching. Before her,* chattering students form a mass. Ahead of her the day holds a tangle of tasks. Within her, a thousand concerns converge.

Who am I? What is this teaching all about? Does my supervisor think I'm okay? Do my students think I'm okay? Why won't they shut up? Why won't they talk? How can I fit everything in all at once? How can I last this period?

And so on!

It is hard to imagine how this student teacher is going to identify target goals for improving her teaching, adapt to the school environment, figure out kids, plan activities, and grow as a professional - all in nine or ten weeks. It is hard to imagine how she will emerge at the end an effective teacher.

Does anyone really expect that she should? Though the educational community and the general public probably share the opinion that the teacher is the most crucial variable in schooling, the body of teachers regarded as highly competent remains very small. Robert Bush recently argued (1977) that we know how to train teachers, although practice is greatly discrepant from what we know.

* To avoid the awkwardness of s/he and similar emerging conventions, and yet to avoid an all male-gendered paper, I have alternated pronouns.

The focus of this Bulletin is on the desired product of training: the effective teacher. It assumes that if we know what we want to produce, we can make better decisions about how to do so. The literature reviewed falls into two categories: (1) the teacher as person, and (2) recent research on teacher effects. The discussion of these two bodies of research proposes that we respond to the implications they suggest with a dual continuum of training. The first focuses on the development of a secure self and an ability to interact effectively in the school environment. The second focuses on a continuum of skills, from minimum competencies toward breadth and depth of skill development. Both aspects of training require ample practice, feedback, and time.

II. The Teacher as Person

Perceptions and Attitudes

One perspective on teaching effectiveness views behavior as a surface manifestation of the person (his qualities and beliefs), and learning as the product of personal interactions of students and teachers. Arthur Combs has been a major figure in defining this perspective. He and his colleagues have based their theoretical position on a decade of research on the nature of effectiveness in the helping professions and a number of principles from humanistic and perceptual psychology (Combs 1974).

Based upon their research and study, Combs and his colleagues have identified these major areas as crucial in the perceptual

organization of good teachers: (1) rich, extensive perceptions about their field, (2) accurate perceptions about what people are like, (3) perceptions of self leading to a sense of adequacy, (4) accurate perceptions about the purpose and process of learning, and (5) perceptions of teaching methodology as related to purpose, tasks, particular populations, and personal style.

Combs believes that a teacher education program which helps students acquire a growing sense of personal meaning is characterized by: (1) experiences which give students a chance to build a need to know, as opposed to opportunities to practice what the program has already decided a student must know, (2) non-threatening opportunities to explore teaching and learning and to search for a personal methodology, with ample encouragement, (3) mechanisms for feedback of a variety of kinds: the student learning more about self, the program responding to student needs, the student interacting with peers and faculty in explorations of meaning about the experiences provided and sought.

The emphasis on perceptions is closely related to research on attitudes and Loree's attempt to delineate a field of research on shaping teachers' attitudes is helpful in considering the feasibility of shaping or influencing attitudes, although the question of whether that should be attempted is of course an issue in itself.

Loree (1971), reviewing goals and components of several model programs, identified three types of attitudinal objectives recurrent in teacher education program statements: Teachers' attitudes toward

1) self, 2) pupils, and 3) the teaching-learning process.

By its very nature, the philosophy which espouses "self as instrument" demands that training not impose values and methods on students, yet that stance is itself value-laden and method-suggestive. The issue posed for educators and addressed by Loree (but by no means answered) is an important one: What attitudes of students should and can be shaped or influenced by a training program? (The related issue is whether attitudes should be assessed as part of entry requirements.)

To answer that question is to state what it is an effective teacher does and is, in relation to attitudes and perceptions. If we wait for a definitive answer, we are stymied in efforts to make improvements now. Educators seem to agree, at least, that the "self-actualized" teacher is more likely to encourage child learning than the teacher uncertain of who she is, lacking in confidence in her adequacy. The Bicentennial Commission on Education for the Profession of Teaching (AACTE), in its recommendations regarding the preparation of teachers, emphasized the importance of the trainee developing self as a tool of teaching (Howsam 1976). The question becomes, what is self-actualized? This is a question many within and outside of the field of education have been considering for some time. For the purposes of this discussion, consider these elements:

1. a good "sense of self" - knowing what one believes and how one wants to behave and be perceived,
2. confidence in one's ability,
3. a sense of purpose, in this case, specifically related to

wanting to teach for reasons one can articulate,

4. an ability to relate with others in positive ways.

These seem to be elements of "self" that are earnestly sought by many teachers, particularly those who might be called mature as teachers. I recall an experience I had one summer in Montana. Quite unsure whether anyone would even come, I provided a series of "self-assessment" workshops for teachers throughout the state. The large attendance and enthusiastic, even intense, response was a poignant reminder of the isolation many teachers feel and their desire to find or build consonance between what they want and what they do. Other consultants who have worked with inservice can certainly verify the interest of teachers in workshops focused on interpersonal skills. Although many of these felt needs may come from maturing perceptions of self and teaching, one cannot help but wonder where such teachers might be if they had had such experiences in their training.

Levels of Concerns and Maturity

An important conceptual and research base for training focused on teacher perceptions and attitudes has been the work of Frances Fuller. She has presented a conceptualization of "becoming a teacher" that was based on extensive work, largely at the University of Texas, centered on the concerns of teachers (Fuller 1969; Fuller and Bown 1975). At least one study has contradicted her findings (Gaede 1976), but her evidence is extensive and convincing, particularly to those working with beginnning teachers. She proposed a model that described learning to

teach in three "concern phases". 1) concerns with self (survival concerns): adequacy, class control, supervisor's opinions, etc.: 2) concern with teaching (the task): the scope of the work, inadequacy of resources, inflexibility of situations, etc.: 3) concerns with pupils (impact): recognizing pupil needs, matching content and methods, etc.

Fuller (1969), summarizing extensive data about the concerns of beginning teachers, said that they are worried about content adequacy, discipline or control, and evaluations by their supervisors and students. There is remarkable consistency in the absence of concerns about instructional diagnosis, design, and methodology.

Studies indicate, further, that students who express rigid, negative, custodial attitudes often are the same students who, before student teaching, expressed their belief in "humanistic ideals" in education. (Iannaccone 1963, Hoy 1967, 1968, 1977, Gibson). This phenomenon is commonly referred to as "bureaucratic socialization" - the process by which a new member learns norms and is oriented to the school organization. The student teacher quickly confronts his naivete and feels his vulnerability as a neophyte. He turns to the organization - his prospective colleagues - for help in "settling kids down," "keeping the lid on," and enforcing discipline. If the person representing the university (and probably an idealized version of the school reality) demands a conformity to the ideal, the student is caught in a vise of pressure and frustration.

Hull (1975), considering the problems of the new teacher, concluded that induction programs ought to be competency oriented. "The feeling of being well-prepared to carry out a well-defined task will inevitably quell self-concern..." His assertion that the concepts of competency-based training and teacher concerns can be meaningfully linked seems an important one to consider. Hull also emphasized the need for very explicit communication of expectations, and congruity of expectations between the school and the university.

Another approach is to build a training program squarely on the base of student concerns. A program that embodies this approach is the Personalized Teacher Education Program at the University of Texas at Austin, which began in 1956. (Peck [1976] also asserts that the program embodies Hunt's [1975] Person-Environment-Interaction paradigm.) This program encompasses a number of principles of individualized instruction, as well as processes such as personalized assessment feedback and performance feedback. Evaluations of two successive examples of this program verified the superiority of the personalized program over the conventional. Peck reported, "...students profited more from a personalized program with respect to characteristics where they were relatively ineffective to begin with; and most students were below average on several characteristics." The Texas program has been enthusiastically adapted by the University of Colorado at Greeley, where students experience "personal psychological growth experiences" and training in "interpersonal concerns and sensitivity" (Welch 1976).

What is not apparent in such programs is planning for the acquisition of specific teaching skills, such as diagnosis and instructional design.

The desirability of nudging the novice teacher toward maturity is inarguable. A teacher concerned less with self and more with pupil needs would seem more likely to meet those needs than the teacher treading in trepidations. Yet a curious tail-chase appears. How does a teacher lacking in skills -- however self-actualizing as a person -- move from fear to effectiveness? Or, as Fuller has it, how does a teacher mature?

Training and Socialization

Whatever decisions a program reflects in its objectives, the problem of sustaining training effects under the pressures of socialization remains an important one.

Consider, for example, microteaching. This training approach is largely accepted as able to impart competencies in specific skills (Borg et al., 1970). Its success, however, is demonstrable in the laboratory (training setting) rather than the classroom (Copeland 1975). Copeland (1977) has attempted to explain some of the variables affecting the transfer of skills - or lack of transfer. He explored ways the cooperating teacher might affect the transfer, and his study revealed interaction effects between training and whether cooperating teachers were trained or themselves exhibited the skill under consideration. Copeland's work further explicates the phenonmenon of socialization, illustrating as it does that the classroom setting, i.e., the cooperating teacher, must provide training support for skills or the earlier laboratory training is lost. More optimistically stated, Copeland's study suggests that there may be ways to build the needed support.

The socialization is probably even more powerful in the novice teacher's first year(s) of teaching where the training program is suddenly "an old story." A study in Australia (Young, 1977) illustrates the problem. Six months after appointment to their first assignment, the self-confidence of new teachers was reduced and specific teaching issues were identified — chiefly classroom discipline and control. These findings typify training program outcomes, and certainly imply that preservice training must be augmented by improved support in the first year of teaching — the "induction" year.

It appears that socialization is more powerful than training. There is no real evidence that student teaching has ever really served a training function anyway. If the training - which came before teaching - is "unreal" and the socialization is "real" there can be no question where the power lies. If students, through socialization, were learning to teach, all this would be a moot point. But a control idealogy is not a teaching methodology. Students learn to survive, not to teach effectively.

It may help to think of the early stages of training as a kind of "critical age" where intervention may accelerate the maturation process or assist the young teacher in moving out of self-focused concerns. Such intervention must surely recognize the existence of and validity of these concerns. They cannot be brushed aside. There may be, in these concerns, a clue to the ineffectiveness of many traditional training interventions. Coursework typically focuses on concerns about pupils before the teacher-student has any experience with teaching;

that is, concerns focused on the third level are talked about before the student has even felt the first level! It is not surprising that so many students find foundation courses "irrelevant." Yet knowledge about processes of learning, educational setting, etc., are important; timing may be the critical variable.

The second kind of intervention is the student teaching term. It is certain that student teachers, and probably most first year teachers, sit squarely on the self end of the continuum. That self has to deal with the pressures of a new setting, new demands, new norms. Most public secondary schools are bureaucratic structures, and it is inevitable that the bureaucracy prove stronger than ideals. The student teacher may even come to resent the mythical teacher-person she heard about in her training. The ability to control is what the student teacher feels judged on. The teacher training program, however, has had other things in mind.

There is probably a distinction between training for schools as they are and schools as they should be. A program needs to be very clear about what it is training for. Secondary schools are accepted by almost no one as ideal settings. Concerns generally center on climate. Yet climate is a complex variable, and surely not within the control of a single teacher. Students entering the profession as they do, one by one, isolated by graduation from the support of their training peers or mentors (and in a typical program there may have been little support there), and with little sense of what the social structure

of the school is likely to be, cannot hope to change organizations as individuals. (A wealth of literature on organizations and change processes substantiates that.)

One way we might help is to explore ways to give teachers better socio-psychological tools for helping them reconcile the reality of the school with their best hopes and ideals for teaching. There is much in sociology and anthropology that could help us; training students in observation focused on understanding the group and the setting could help. There seems to be no clear advice on what to do, but this is ground in desperate need of breaking. Ultimately we might hope to see teachers as change agents. (At least one program, Project Change at State University of New York, has in fact focused its training precisely in that direction: to prepare teachers as agents of change toward more open elementary classrooms and teaching.) For this to happen, we might think through what equipment teachers need for such agentry. At a minimum, a program could implement procedures for encouraging students to share and discuss their ideas about schools, based upon their observations and experiences there, over a period of time prior to and including student teaching. This could begin with foundation courses.

Most important may be the intervention possible in the induction period itself - after student teaching, and before the teacher assumes full responsibility without training support. Ideally, that period should be a culmination of prior training experiences - not a sudden abandonment of the new teacher.

It might help if the survival concerns of teachers could surface earlier, and serve as motivators within the training. The student teaching experience could be viewed as a time for identifying and validating these concerns, and a time for readying the student for induction - which takes more time. Readiness to teach is now generally determined in an arbitrary, linear fashion, and usually declared fullblown at the onset of student teaching. Such an approach creates a sink or swim setting, rather than one with an adequate "feedback loop" to the training. There simply isn't time in a brief term to try, fail, learn from experience and feedback, and move toward maturity as a teacher.

Bush (1977) has discussed the need for "practice, practice, practice... not just practice, but frequent, varied, and criticized practice."

Argyris and Schon (1977) stated "the objective of the field experience, like the objectives of all clinical experience, is to learn to become more reflective under real conditions so that effective ad hoc theories of action can be created and tested" (p. 188).

Much of what is teaching is probably best learned in the school setting - with feedback and support. This suggests a clinical approach, very well reviewed by Warner and his colleagues at the University of Houston (1976). After reviewing clinical models in clinical psychology, allied health professions, business administration, and nursing, they concluded that "practicing professionals who supervise trainees have a significant 'occupational socialization' impact, and thus have tremendous potential for bringing to full fruition - or undoing - previous

participation." (p. 92) After discussing a number of interpretations of clinical approaches in teacher education, these authors proposed the following criteria for clinical experience: (1) the individual is engaged in actual observation and treatment of clients, (2) the experience occurs in natural settings, (3) performance expectations of the individual are explicit and public, (4) feedback is systematically provided on performance demonstration, and (5) feedback is provided in a manner that encourages the individual to assume increasing personal responsibility for future professional growth.

Recommendations

Based on the discussion of the literature focused on the "teacher as person," the following suggestions are presented for consideration.

1. Recognize the personhood and concerns of the student in the teacher education program; at least they should be discussed by faculty as a real phenomena.

1.1 Provide experiences for students which help them discover and disclose themselves in ways that help them make decisions about whether they really want to teach, and what kind of teaching style and methods they can best use.

1.2 Provide experiences which focus on building interpersonal skills.

1.3 Explore ways to give new teachers better socio-psychological tools and insights for helping them reconcile the reality of the school with their best hopes and ideals for teaching. Ultimately we want to think of teachers as change agents; we must begin to think through what they need for such agentry.

2. Clearly delineate and publish the expectations of the student/student teacher. Borrow from the competency-based education movement not the enormous inventory of competencies, modules, scales, procedures, etc., but criteria for competency-based training. Such criteria could help promote program integrity and assure minimum proficiency.

2.1 consistency between objectives and philosophy.

2.2 indentification of expectations.

2.3 training opportunities in a range of formats.

2.4 means for verifying mastery of basic skills.

3. Make the school-based experience of the student teacher more clearly defined, more ardently supported, and more cumulative (over a longer time frame).

III. Research on Teacher Effects

Overview. Studies of teacher effects either explore the relationship among certain variables and student outcomes (correlational) or attempt to assess the effects of different treatments on learning (experimental). Almost all the literature reviewed in this section is of the former type. For the most part, it focuses on process variables: actual activities of classroom teaching which can be observed, such as pupil talk, time on-task, etc. (Cruickshank 1976). Generally, these studies have measured pupil gain in a pre and post fashion, and observed teacher behaviors in between, thence to look for links between the two. A few more recent studies are taking the

different approach of identifying those teachers who have, in a stable manner, produced pupil gains over a period of years, and those who consistently have not, and trying to identify dimensions of teacher behavior that differ among the effective and ineffective teachers.

For readable discussions of issues and problems in teacher effectiveness research, the reader is referred to Good, Biddle and Brophy (1975), and Brophy and Evertson (1976); for a more critical and complex review, to Dunkin and Biddle (1974).

Advancements in recording and analyzing behaviors have had tremendous impact on teaching research. Probably no one has found more podiums for discussion of these techniques and the findings of research using them than Barak Rosenshine. An obvious entry into the teacher effectiveness research is the 1973 Rosenshine and Furst review published in the Second Handbook of Research on Teaching (1973). After a thorough review of categories and instruments, the authors listed these characteristics of teacher behavior as the variables most strongly related to measures of student growth. The first five are the strongest: 1) clarity (including elements of organization); 2) variability (in materials, resources, precedures); 3) enthusiasm; 4) task-orientation; 5) student opportunity to learn criterion material; 6) use of student ideas, indirectness; 7) criticism (negatively correlated); 8) structuring; 9) use of multiple levels of discourse; 10) probing; 11) level of difficulty. At least as interesting is the list of behaviors not significantly or consistently related to achievement: non-verbal approval, praise, warmth, ratio of indirect to

direct teacher behaviors, questions classified into lower and higher classes, student talk, and student participation.

Heath and Nielson (1974) reanalyzed the 42 studies cited in Rosenshine and Furst's article and concluded that the research relating to teacher behavior and student achievement does not offer an empirical basis for prescribing teacher-training objectives, both because of the weakness of the research and the inadequate conceptualizations of teaching. Rosenshine himself says that his thinking "has shifted a bit," and now prefers to focus on student behaviors, or, more specifically, the idea of "academic engaged time" (Rosenshine and Berliner 1977).

The idea of time-on-task is not a new one. In the Carroll Model (1963), time was the central variable in school learning: When the quality of instruction and/or student ability to understand the instruction were less than optimal, time needed increased. The concept of mastery learning is related, too. Bloom (1974) has argued that increasing hours with the same calendar periods for those needing it is more effectively advantageous than adding years, and that higher achievement can be gained, with adequate feedback and corrective procedures.

R. P. McDermott, in a different perspective on children's time on learning tasks (1977), argues that "Success in getting organized for learning depends on how well the participants communicate to each other the importance of the learning tasks." His plea to examine how children establish relations and the contexts in which they learn well reminds us that the line between student learning and teacher behavior is not so neat, clean or straight. It seems likely, however, that recent attention

on the academic-engaged-time idea may represent the beginning of more research focused on what the student does rather than the teacher.

Rosenshine (1976), summarizing major publications in the area of classroom instruction since 1970, reviewed results on six variables of interest, focused on studies of instruction for low SES primary grade pupils, and described a "direct instruction" instructional pattern. This latter pattern was generalized from the findings related to teaching reading and mathematics to primary children with low verbal ability and low socioeconomic class. These are characteristics of the model: direct supervision, teacher/leader dominance of activities, narrow questions, immediate feedback, direct, business-like learning, and small steps through structured materials, in the context of a warm, supportive environment.

Follow Through. The comprehensive observational study by Stallings and Kaskowitz of classroom processes and instructional practices in Follow Through Planned Variation Projects, completed in August 1974, examined classroom processes regardless of model, and related instructional processes to child outcomes. Stalling (1976) reported:

> A study of instructional procedures used in classrooms and the achievement of children indicate time spent in reading and math activities, and a high rate of drill, practice, and praise, contribute to higher reading and math scores. Children taught by these methods tend to accept responsibility for their failures but not their successes. Lower absence rates and higher scores on a nonverbal problem-solving test of reasoning can be attributed in part to more open and flexible instructional approaches in which children are provided a wide variety of activities and materials and where children engage independently in activities and select their own groups part of the time.

Soar and Soar (1976), reporting the results of four studies, including

a Follow Through project, found unexpectedly that different kinds of pupil learning varied in the amount of teacher structuring associated with pupil gain. "This suggests that the higher the cognitive level of the learning objective, the less the degree of this kind of teacher control was appropriate for greatest pupil learning" (p. 261).

The Texas Teacher Effectiveness Project. This project was a two-year, replicated investigation of correlates of teacher effectiveness, conducted in second and third grade classrooms. A basic finding that the optimal match of teachers' instructional behaviors to characteristics of students varied (Brophy 1976).

> Briefly, the more successful teachers in high SES schools focused heavily upon the curriculum and taught with high expectations and a critical demandingness... The most effective teachers in low SES schools also showed high expectations, but they differed dramatically in their behavior...the most effective low SES teachers were patient and encouraging, willing to develop personal relationships with students, willing to reteach and use substitute materials...

BTES Studies. Phase II of the Beginning Teacher Evaluation Study studied children's performance in reading and mathematics in second and fifth grades. Observations of teachers' performances were analyzed for correlation with pupil achievement. A summary of the major findings follows (McDonald 1976).

The method of organizing instruction is a critical domain of teaching performances. For example, more individual monitoring and less group work is more effective for second grade mathematics, whereas more group work is effective in reading instruction in second grade. Grouping students for direct instruction is not effective in fifth grade math.

Instructional activity that decreases instructional time is negatively related to pupil performance, a finding that parallels other

"direct instruction" findings, as above.

The character of effective interactive techniques varies by subject and grade. In fifth grade reading, where higher cognitive processes are being developed, learning seems more likely to occur if teachers spend considerable time discussing, explaining, questioning, etc.

The California Beginning Teachers Evaluation Study studied the classrooms of teachers who were identified previously as more or less effective in promoting student achievement (Berliner and Tikunoff, 1976; McDonald, 1976). At both second and fifth grade levels, effective teachers were found to be more satisfied, accepting, attentive, aware of developmental levels, consistent, democratic, encouraging, tolerant, flexible, optimistic, equitable, and knowledgeable. They also provided more structure for the learner, promoted students to take responsibility for their work, were less belittling, less harrassing, etc. Effective fifth grade teachers differed from second grade teachers in that they did less drilling, excluded students less, and used less nonverbal behavior to control or change student behavior.

Clarity. In a large observational study of teaching effectiveness in fourth grade math, process data were analyzed to see how effective and ineffective teachers varied in behaviors, similarly to the Berliner study just cited (Good and Grouws, 1977).

For whole class discussion, clarity was important. "High achievement teachers presented students with a clear focus on what was to be learned, provided developmental (process) feedback when it was needed, structured a common seatwork assignment for the class, and responded to individual students' need for help." In other words,

teachers tended to ask product questions requiring single answers; using the process questions as feedback, the class moved in a diagnostic cycle.

Two patterns differentiated the behavior of high and low teachers: 1) highs demanded more work and achievement, increasing time-on-task and opportunity to learn, and 2) students in effective teachers' classrooms had more opportunity for immediate, nonevaluative, task-relevant feedback.

The variable clarity was investigated using a preliminary set of 110 low-inference teacher behaviors compiled from 1009 junior high school students (Bush, Kennedy, and Cruickshank, 1977). Teacher clarity appeared in the resultant factors to be a meaningful, distinguishable and potentially operational construct. It appears to be multidimensional: 1) explaining concepts and directions in an appropriate manner and at an appropriate pace, and 2) using examples and illustrations.

The effective explanation of concepts was examined in a study in which 288 third, fourth and fifth grade students were taught by 22 teachers (20 of them preservice). Major categories used to generate teacher process variables were substantive, semantic, and instructional strategy (Armento, 1977). The substantive aspect referred to the adequacy, accuracy, and relevance of knowledge made available to students. The semantic aspect referred to appropriate choices of terminology. Instructional strategy referred to the verbal activities or "movements" performed by the teacher. Five low-inference teacher variables related positively and significantly to the criterion measure. The effective teacher gives a concept definition, gives a positive concept example, reviews main ideas, explicitly includes more of the relevant

concepts labels and generalizations. Each of the high-inference teacher process variables related positively to student criterion measure: accuracy of concept examples, task-focus, balance of concrete-abstract terminology, and enthusiasm. (This latter variable, enthusiasm, surfaces over and over again, and there is some indication that enthusiasm can be successfully trained for [Collins, 1977].) The correlation between content covered and achievement were greater than any obtained for teacher behavior variables. This parallels Stallings and Kaskowitz's findings that correlations between time and math achievement or reading achievement were the highest correlations in their study (Stallings 1976). (From these correlations of time on task and achievement, and earlier studies linking opportunity to learn to achievement, has come the previously referred to concept of academic engaged time.)

Questions. Teacher questions are a variable that have been a major area in most teacher training programs; intuitively, trainers have long stated that "higher is better" and developed training to match this assumption. Rosenshine, reviewing two experimental studies of questioning by Ward and Tickunoff and by the Stanford Program on Teaching Effectiveness, found that classes where students were asked more recall questions did slightly better on recall tests, whereas all classes did equally well on integrative questions, no matter what percent were asked in class. Low ability students did best with factual questions and without probing and redirection, whereas high ability students did best with probing and redirection. "...the continual bromides that factual questions are bad and higher level questions are good were not supported by well-designed research"

(Rosenshine 1976b). Gall (1977) reported that questioning experiments resulted in findings that teachers' use of probing and redirection did not affect learning outcomes. His earlier remarks that attention should be focused on what types of questions teachers should ask rather than only those they do ask to find some response in his own and other research since his review of the use of questions in teaching (Gall 1972).

Affect

As for affective variables, they have not been much linked with student gains in cognitive achievement. Good, Biddle, and Brophy, in reviewing data from studies of secondary schools (1975), suggested that learning gains are most closely related to the general climate of learning. Affective teacher variables, such as gaining student respect and forming good relationships with students, appear to be important. However, measures of student attitude correlate weakly or not at all with student achievement, and research has not identified those teacher behaviors that facilitate the affective growth of students.

Management

A perspective on classroom management that appears useful has been that of Kounin (1970), whose findings were supported by Brophy and Evertson and by his own continuing research (Kounin 1975). Kounin studied several hundred variables, including "desist" ("stop!") techniques or qualities such as clarity, firmness, focus, and teacher attitude toward pupils. None of these variables consistently affected the behavior of children or their task involvement. After a second lengthy look, the researchers found that well prepared and focused

lessons, run briskly and smoothly for children who know what is involved and what is expected of them, seem to keep children too busy for trouble. Kounin's factors were these: 1) with-it-ness ("eyes in the back of your head"), 2) overlapping (doing more than one thing at a time), 3) smooth transitions between activities, 4) ability to keep a lesson's momentum going, and 5) suspense. These findings seem to fit closely with McDonald's contention that the method of organizing instruction is a critical domain; and with the concept of academic engaged time, the effective teacher seems to facilitate such time.

Kounin examined consequences of different control styles, but not the ways organization of classroom instruction affects teacher behavior.

A recent study (Bossert 1977) examined patterns of group management, task organization, and teacher controls in recitation-dominated classrooms, compared to multi-task dominated classrooms. Bossert concluded that "task has considerable influence over the type of authority exercised in a given instructional situation." Recitation seemed to result in high desist rates and student demands for equity in discipline or management strategies; the multi-task setting allowed more personal individualized management strategies.

Applicability of Findings. The line of research just discussed, on teacher effects, is yielding valuable data and hypotheses for further testing. To make the leap from this yet young research to the arena of teacher training, however, may require very long legs or a very long

start on the jump. Two major problems are nettlesome: concerns with the outcomes used as criteria, and questions about the relevance of studies focusing on elementary classrooms for the secondary teacher.

Using pupil gain measures as criterion for effectiveness has done much to "tighten up" the research, and has resulted in some surprising findings - that praise is not especially helpful, for example, and that too much can be lavished on the learner. But scores on standardized tests are surely not the end-all of education, and any decision-maker in education, whether at university, district, or classroom level, must be aware of other desired objectives, such as increased self-esteem/positive attitudes toward learning, or whatever. And research focused on only one kind of objective must be considered as valuable but limited in scope. This is not to say that helping children learn (in demonstrable, i.e., measurable) ways is not important - and <u>for some</u>, <u>most important</u>.

The second question is also complicated. By far the majority of studies have focused on elementary classrooms, and even more specifically on reading and mathematics instruction, usually in primary grades. Yet it would be foolish to dismiss too readily these studies as lacking in implications for secondary teaching. Although we must obviously operate with a high inference level, we can suggest a number of implications from elementary studies, based on ways that the findings relate to pupil characteristics other than age and grade level. Furthermore, although Jere Brophy's recent argument for training primary teachers

in a way separate and distinct from other level teachers is provocative (Brophy 1976), the division of students above fourth grade into elementary and secondary seems unnecessarily arbitrary. To place students instead on a kind of continuum, according to their mastery of fundamental skills, their experience with and capability for independent learning, and their relationship to particular content plateaus, seems for more useful in terms of determining appropriate instructional strategies. This perspective, along with our knowledge that secondary students have not, by virtue of age, automatically moved equally far along some theoretical continuum, makes a case of some strength for looking to elementary studies for guidance.

Two aspects of secondary schooling suggest caution in interpreting elementary studies: the range of curriculum (differing hugely from the learning of primary skills, for example), and the difference in curricular/environment structure of elementary and secondary schools. In considering direct instruction as an instructional approach, one would obviously be more likely to match it (even hypothetically) with lower skilled students or lower cognitive objectives. But aspects of direct instruction may indeed be appropriate for what are apparently very different learning situations. Large amounts of process feedback might help the student trying to construct an argument in an anthropology class, for example. Modeling, practice, and feedback may be quite appropriate in teaching certain sentence revision skills. All this is extremely tentative, of course; but direct instruction - an evolving concept, truly - does not necessarily mean rote, unison response, nor need it be only for reading and math.

The results of studies suggesting that learning is best when it is business-like, well-organized, and where students know what is expected of them and are given feedback cannot, in fact, be read as a prescription even for the low SES children who were studied. Instructional decisions are complex; they involve a constantly shifting convergence of numerous factors. A chain of instructional events might look something like this:

1. Lower-achieving children lacking in basic skills require close, task-focused instruction characterized by lower cognitive objectives and small units of learning.

2. If such children are to gain in more complex objectives, they must also have experience with less structured learning activities in which they gain "learner skills," i.e., self-direction.

3. The teacher must recognize differences in the cognitive level of objectives, the appropriateness of the objectives, and the most likely degree of control/freedom in the structure of the activities.

If one accepts the thesis of some researchers (e.g., Taba) that the child achieves higher objectives only if the "lower" skills have been mastered, it would be reasonable to make a hierarchy - from specific skill with direct instruction (in some form) to higher level objectives with more indirect instruction. Unfortunately, there are holes in the idea. Besides the high/low SES variable, we must consider the age and grade as well. Children may be learning new skills in higher grades, but best learn them differently than primary children. Older children "unlearning" an accumulation of error-ridden habits in a basic skill area may require a different approach than the younger

with no "history" in the skill. Brighter children probably make leaps to "plateaus" of learning, and to move them through small units of instruction would be inefficient, probably ineffective, and perhaps even deleterious. Whether these things are true have not been documented yet, but it would seem less than cautious to stomp from a first grade Follow Through math class into a secondary classroom with a set of direct instruction dicta. At the same time we must remember that the likelihood of the secondary classroom containing at least some young people with serious skill deficits increases as efforts to "mainstream" handicapped children becomes reality.

The child who reaches junior high still lacking fundamental skills - not to speak of self-directing skills, with poor self-image tossed in - may need to be taught fundamental skills to much as are younger children. This remains a question. With that question are some important realities. Peck (1976) discussed findings from large-scale longitudinal studies across several nations that suggest that nobody has found an effective way to educate the children from the lower 60 to 75 percent of the population! The almost epidemic wave of CBE requirements for public schools across this country further attests to the public concern. (Hathaway and Scofield 1976). The secondary classroom is in the vast majority of cases a heterogeneous group of young people treated as a homogeneous mass, and one wonders if anyone "fits."

Conclusions from earlier studies in secondary schools fit in with the data from elementary studies in this crucial aspect: "Indirect teaching seems to be increasingly appropriate and successful to the extent that students have mastered fundamental skills and are capable

of assuming responsibility for their own learning" (Good, Biddle, and Brophy 1974).

The secondary schools data also suggest that teacher relationships with students (e.g., teacher warmth, empathy, and enthusiasm) and the teacher's ability to gain student respect are very important variables. But relationships, it must be remembered, occur among people; they are not controlled solely by teacher characteristics and behaviors. If young people have a past pattern of failure, it is hard to imagine how empathy or enthusiasm will achieve much unless it supports a sound instructional approach that lifts failure and builds success and confidence.

An additional area not discussed within this paper, but well worth mentioning, relates to student behavior. Contingency management and behavior modification techniques do seem to work in classrooms, in that children can be directed to tasks more effectively through positive management strategies. It seems time to ask why such strategies - as one option - are almost never introduced to secondary teachers. If the reason lies with faculty unfamiliarity with, or bias against, such strategies, a look at what they really are and at the research focused on them might be engaging and enlightening. In almost every state, some training in these techniques is necessary for certification to work with handicapped children. Since "regular" secondary programs will soon be preparing teachers to work with mildly handicapped children in the regular classroom, there is even more reason to consider these approaches, long the domain of special educators.

Recommendations

1. Re-examine operational assumptions. Any program can profit from a consideration of the assumptions under which it is operating. Although it can be uncomfortable to admit that we cannot be certain about some of our sacred tenets, it is healthy to look at their soundness - and, possibly, to suspend judgments long enough to consider new perspectives. Obviously, definitions of effectiveness at this juncture hinge largely on philosophical attitudes toward teaching and learning, and it would not be surprising to find that a typical teacher training program faculty represents a potpourri rather than a well-articulated, integrated, or at least compatible stance.

2. Define, operationally, crucial teaching skills.

2.1 Instructional decisions. A key idea that seems to emerge from the research is that the teacher must be able to make and implement important instructional decisions, some long-range, some more spontaneous. (This idea of the teacher as decision-maker is, of course, not a new one. Bruce Joyce, for one, has done some provocative writing about it.) The teacher must know what level of objective is appropriate and what measure of structure is required in light of student need and readiness. This implies component skills like (1) an understanding of cognitive levels and types of objectives, (2) an ability to analyze and structure a learning sequence, (3) a foundation of strong diagnostic skill, i.e., the ability to determine "where a student is" in relation to the learning.

2.2 Classroom discourse. The classic formats, lecture and general group discussion, may be naive frameworks for training instructional leaders/managers. Both types of discourse, to some extent (and especially discussion) presuppose mastery of skills like those just cited. Practice of "survival" skills by the novice teacher may not be best accommodated by a discussion format. Such strategies also presuppose mastery of certain subskills by the student. In discussion, "The degree of structure, and the range and level of task goals to which the discussion is aimed may need to be different for students at different age levels..." (Gall and Gall 1976). The statement takes on additional meaning when we add: at different ability or achievement levels.

2.3 Management. Train students as effective classroom managers, with the emphasis on instructional variety, pacing, and monitoring. The development of a repertoire of strategies is desirable; given a longer time frame, such a range of teaching skills could be nurtured.

2.4 Curricular materials. It is time we started training teachers to find, make, select, evaluate, arrange, assign, monitor, and, in short - use - materials. We often hear that "the textbook is the curriculum." In secondary classrooms, the comment is often woefully inaccurate. Rather, "Whatever the teacher can dig up" may be the curriculum. A teacher with inadequate materials is a teacher running with hobbled feet. Yet teachers seem consistently to use what has been piled up before them, what someone else ordered, or what a sales-person brings through. A new teacher should have some experience and training in making decisions about materials. Ideally, this experience should occur in a real setting where the decisions matter.

Some fairly basic skills in planning student contracts, adapting curricular materials to such an approach, monitoring small groups working independently, focusing work, etc. could make it possible for a teacher to provide for students who do not need constant or close attention, so that those requiring more direct instruction may get it. All of this must be considered with thought for the structure of secondary schools which gives a teacher forty or fifty minutes a day for nine to eighteen weeks to accomplish a great deal! Nonetheless, the conspicuous absence of these skills and strategies in secondary classrooms makes it seem a mistake to defer this aspect of training until student teaching, as if to assume it is taken care of by socialization.

A Dual Continuum: A Summary

Consider again our student teacher, in the light of the previous discussion. She trembles classically on the taut edge of her concerns -- for survival, for control, for basic instructional effectiveness in the real world of the classroom.

What might we do to change the scene, to give her greater confidence?

First, we must help her know herself as teacher person, and regard her concerns with respect and support. Secondly, we must give her better skills at her "survival" level: skills focused on adequate management and instruction.

We can do both things if we see her, not at the end of her training but at an important point on a continuum of training that will support her into her novice year and help her increase her effectiveness.

Then we can hope to see her at some later point, more secure, diverse, and pupil-focused -- an effective teacher.

IV. Recommendations: A Summary

The Teacher Person/Teacher Concerns Literature	Research on Teacher Effects
1. Recognize personhood and concerns of the students. Provide self-discovery experiences. Provide training in interpersonal skills. Provide help in reconciling the real and ideal. 2. Clearly state program expectations. 3. Provide more clearly defined, better supported field experiences over a longer time frame.	1. Re-examine operational assumptions of training or inservice programs. 2. Define crucial teaching skills in: Instructional decision-making. Classroom discourse formats. Management. Use of materials.

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